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BLIZZARD

THE JOSEPH DICK MFG. CO.
CANTON, OHIO.

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Illustrative and Descriptive Pamphlet

on

Feed & Ensilage Cutting & Shredding Machinery

Copyright 1908, by Joseph Dick

Manufactured by
The Joseph Dick Manufacturing Co.
Canton, Ohio, U. S. A.

Introduction

THE importance of using proper machinery on the farm is becoming recognized more and more every year as an essential factor in profits.

The farmer of today is primarily a business man and knows that to get the utmost out of his investment, he must manage right.

The use of silos and the feeding of cut fodder have grown apace as the result of scientific investigations proving the value of these methods. The farmer is no longer a conservative but is quick to adapt money-making and labor-saving ideas, consequently it is safe to predict that within the next five years the farm which does not have its silo, will be the exception rather than the rule.

While the question of what kind of a silo is best to build has been much mooted and advocates for and against certain styles and materials have waxed warm in their discussions, the decision of what cutter to use, admits of no dispute.

And the cutter is no small item in silage success and profit. Proper cutting and filling are really quite as important as the silo itself. Equally vital are labor and time saving.

It is self-evident that a cutter which works steadily, takes whatever is fed to it without hitch and is so built that it outlasts any machine of its kind, is the most profitable machine to buy—the cheapest regardless of what its price may be in dollars and cents.

The Blizzard is that kind of a machine, built for endurance and satisfaction-giving, not merely slapped together to sell; not made to look pretty and dazzle the eye with false colors. It is substantial all the way through and the parts you **can't** see are as carefully made and of as good material as those you **can** see.

The Self Feed Table enables it to eat up green or dry fodder with astonishing rapidity and with very little attention from the operator. It practically runs itself.

The Improved Wind Elevator not only elevates any height and in any direction but distributes the cut feed evenly inside the silo.

The Knives of the Blizzard are extra strong, and the special feature which will appeal to users is that they may be adjusted to or from the shear plate while the machine is running at any speed. This feature is patented and controlled exclusively by us.

Every Blizzard Cutter is tested out at a speed and under conditions 50 per cent. greater than is ever called for in actual use. This is done to protect ourselves as well as our customers. Inasmuch as we guarantee every machine we make, we take every precaution to insure that they are perfect before they leave the factory.

Our guarantee covers every part of the machine as well as the whole. It reads as follows: "Every machine bearing our name we hereby guarantee same to be constructed of good material and built in a workmanlike manner, and if set up and operated as per directions, is warranted to perform the class and amount of work we claim for it."

We have concentrated our energies for 39 years on the manufacture and improvement of ensilage cutters and have maintained leadership in this particular field during all that time. The Blizzard is the original and pioneer of ensilage cutters. Our line of "Famous" Cutters needs no introduction, having been before the public constantly during our business career, which fact alone shows they must have great merit as first-class Ensilage and Feed Cutters.

In the following pages we show the sizes and styles of each machine we make, with descriptions.

Blizzard Ensilage Cutter.

We commence our describing and illustrating the Blizzard Ensilage Cutter by showing you two splendid views, one giving the complete machine unmounted, the other the mounted machine.

All the very latest improvements are embodied in this machine. The improvements referred to are plainly shown and described in other pages of this catalogue. What we wish to particularly call your attention to here is the general neatness in appearance and the simplicity of the construction. Built for business, sufficiently strong in all its parts to withstand the wear and tear of any amount of work required. Each size is carefully proportioned, so that whether you buy a small or large size you are sure of getting an Ensilage Cutter that will do all we claim and all that could be desired. The Blizzard is a satisfactory machine to buy and a more satisfactory machine to use. We therefore invite you to carefully follow us through the pages of this catalogue, for it contains much valuable information. Any points not clear to you will be further explained for the mere asking.

Blizzard With Self Feed Table and Side Table (Unmounted).

Blizzard Mounted on Special Truck.

This and the foregoing cut shows the Blizzard ready for attaching belt and pipe, and all complete for operation.

Aside from strength and simplicity, it has another important feature, namely, the low-down mounting for the machine. The height of the feed table is such that the operator can feed the machine without standing on a platform.

The fact that two men can disconnect the feed table and pipe, and load all the parts ready for transportation in from three to five minutes, and can again replace all parts in from five to eight minutes, goes to show the simplicity of this mounting.

Note:—All Blizzard machines are now so constructed that they can be removed from truck and used on floor, or any sent out unmounted can easily be mounted by simply purchasing our specially arranged truck gear.

When it is desired to mount machine on truck the long sills are placed on top of side sills, bolt same and the change is complete. To unmount the operation is simply reversed, the side sills under machine are placed on under side of cross sills.

We have taken the same pains with the mounting of this machine as we have in the general construction of the Blizzard at large, for our aim is to manufacture nothing but first-class Feed and Ensilage Cutting and Shredding Machinery with labor-saving appliances, that will give perfect satisfaction to the purchaser.

Therefore, if in need of anything in the line we make, you can be certain of getting the very best that can be manufactured.

Important.

Any L11, 13 or 15 Blizzard Cutters sold in previous years having the sectional cast iron rim and outlet can be supplied with the new heavy steel rim with its steel outlet. These new rims are practically indestructible, cut repair expense to a minimum and make the Blizzard Cutter the safest machine in the world to operate.

Blizzard Showing Chain Feed Side, Also Feed Gear Side.

In these two accompanying illustrations are plainly shown the arrangement for driving Self Feed Table, also feed rolls each driven independently by Locke steel space chain.

The automatic chain tightener and lever for controlling feed rolls.

All the feed gears reversing clutch, shifter lever, device for driving the feed gears, feed roll shafts, and arrangement for operating the gate at bottom of fly-wheel case.

The entire gearing is made strong and heavy, very simple and all incased.

The outlet gate being located on rim of Cutter moves with the rim when outlet is changed from one position to another.

The feed rolls have a universal yielding action to accommodate the amount of material passing between them.

They can be stopped, started, or reversed instantaneously.

The lower feed roll and sprocket wheel, likewise the feed gear and self feed shaft bearing are all provided with adjustable universal bearings. These bearings can be readily removed and replaced in case

of wear. They are universal in action always in line with the shafts. The middle bearings supporting the fly-wheel shaft is so constructed that the cutting knives can be adjusted to or from the shear plate during any time, when the machine is running at full speed, by simply turning the adjusting screw which is located directly under this bearing.

The special new feature we have added is a steel rim and outlet. This rim is constructed in such a manner that by simply removing two bolts at outlet, the entire rim can be removed from the machine, or the top half being hinged can be opened up. Then again, if these bolts are slightly loosened, the rim and outlet admits of being changed to any angle desired. The rim is made of steel, gauge 10 and 12, thereby making an exceptionally strong case. A new style Tension Spring is another improvement. It is located on top, and makes a very neat and durable contrivance.

Blizzard Fly-Wheel in Position in Machine.

In this engraving we show the Blizzard with rear plate of main case removed. This illustrates in position on main shaft the Webbed Fly-Wheel, to which are attached the entire cutting and shredding apparatus and fan flights. The hub of the wheel on cutting side is covered with a rim attached to web of wheel. This conceals the entire hub and set screws, and extends over a part of the main shaft bearing. This feature prevents the tough material from wrapping around the hub of fly-wheel.

On this wheel is placed all the cutting, splitting and shredding apparatus, likewise the fans or flights for creating the air blast which so successfully elevates the cut or shredded material.

The combination cutting and splitting attachment is also shown in this illustration. By this device any coarse material such as cane, dry corn stalks, etc., can be split and cut at one operation. This is preferable to shredding when it is desired to mix with mill feed. Some use this arrangement when cutting green corn ensilage. We deem this unnecessary, however, as the Blizzard will prepare the ensilage sufficiently fine and soft enough with two cutting knives only.

The knife supports, also plainly shown here, differ from any device heretofore used for this purpose. They are so constructed that after the knives are adjusted to the shear plate, the supports are firmly secured to the web of fly-wheel. By this means when the knives are removed for the purpose of grinding or changing, the supports remain in fixed position and when knives are again replaced the edge will always be in line with the shear plate. This saves adjustment of knives every time they are attached to fly-wheel.

Blizzard Fly-Wheel Showing Cutting Knives.

This cut illustrates the Blizzard Fly-Wheel with the two cutting knives. This arrangement of cutting devices is intended to cut ensilage, sheaf oats, straw or any material that does not require shredding. Four cutting knives on wheel can be used for the same class of work for which the two knife wheel is used. Four knives will cut the material one-half as long as two knives will under the same conditions. Or on any length of cut up to the $\frac{3}{4}$ inch by setting the machine to twice the length of cut desired, four knives will cut just double the amount that two knives will.

The most desirable length to cut ensilage is $\frac{3}{4}$ or 1 inch.

Blizzard Fly-Wheel Showing Shredding Attachment.

This engraving represents the Blizzard Fly-Wheel with the adjustable shredder bars attached. For shredding the Blizzard has proved to be extremely popular from the fact that all coarse material such as dry corn stalks, etc., are shredded into fine strips, and at the same time removing the dust or smut from it. This makes a very palatable as well as economical food for all stock. Two or four bars can be used according to the quality of the work desired.

Blizzard Fly-Wheel Showing General Construction.

The great success with which the Blizzard Cutter has been crowned during its many years upon the market is largely due to the superior construction of this important part of its mechanism—"The Solid Heavy Ribbed Fly-Wheel."

The illustration will serve to show its great strength in construction more plainly than it could be described. We, however, call your attention to these points:

The wheel is a solid disk, very thick, and in addition to having eight extra strong ribs, connecting the hub with the rim, it is also re-enforced by smaller ribs midway between the hub and outside rim. A more perfectly constructed wheel could not be made giving the maximum strength that the Blizzard Fly-Wheel possesses. Just as this is true of the Fly-Wheel so it applies to all other parts of the Blizzard Cutter. Carefully constructed in all its details has given the Blizzard the greatest strength and durability, reduced the friction to a minimum, and made it the lightest running machine with the largest capacity, thereby giving it the highest reputation as the most successful Feed and Ensilage Cutter, Shredder and Silage Elevator.

Blizzard Mounted on Special Truck.

The illustration given below shows the Blizzard complete outfit, all loaded ready to be transported.

The axles are only 4 feet 6 inches apart, and the whole outfit is very compact. The supporting frame is narrow, which allows the truck to be turned in a very small space.

The feed table and pipe are placed on two elevated bolsters on pulley side of machine. The self feed table apron is rolled up and carried in throat of machine.

By referring to cuts on page 17 you will readily see how the table and chain are removed, also the position of chain when carried on mounted machine.

After feed table and pipe are unloaded, the bolsters are removed by simply lifting them out of the sockets; then the feed table is attached to machine, and all is then ready to place on drive belt and pipe.

Those who go from farm to farm doing job cutting and shredding, will find this outfit as arranged much superior to anything ever built.

The convenience of it saves time, which means money saved for the operator.

Blizzard Improved Silage Distributer.

Fig. 2.

The Blizzard Improved Silage Distributer is designed to direct the cut material into any direction in silo desired, by simply drawing on the small hand rope (See Figs. 1 and 2), which changes the angle of the distributing end of the Silage Distributer. This part of the Silage Distributer can be raised or lowered on a parallel line by the hand rope to any point from a right angle (Fig. 1) to a line parallel with the main pipe (Fig. 2). It will remain in any position without extra appliances or fastening, a feature well worth considering.

All the parts are constructed in a substantial manner of heavy stock, so as to meet the requirements. The ease and speedy adjustment of the Blizzard Improved Silage Distributer will, aside from the saving of labor in the filling of silo, give better silage, for being distributed evenly in silo it keeps more satisfactorily.

No ensilage cutter outfit is complete without the Blizzard Silage Distributer. It is made to be used on either 6, 7, 7½, or 8 inch diameter pipe. On special order we can make it to fit any size pipe from 6 to 9 inches inclusive.

Fig. 1.

BLIZZARD, the Simplest Machine to Set Up and Operate.

We here illustrate the manner in which the Blizzard is taken down ready for shipment. The Feed Rolls and Gearing (after machine is all carefully adjusted and tested by operating) is taken from main machine by removing the Burrs from the six bolts, as shown in cut. This portion of the machine is now strongly crated and cannot get disarranged in shipping. When purchaser receives the outfit, all that is necessary to place it in running order, is to remove the gearing from crate, place same up against main case of machine and tighten up the burrs on the six bolts mentioned, attach Feed Table, as shown in cut (page 17) and your machine is complete and ready for work.

Blizzard Showing Third Bearing for Main Shaft.

The accompanying engraving together with illustrations on pages 14 and 15 give a front view of the Blizzard Cutter showing the third bearing for main shaft. Cut on pages 14 and 15 shows the bearing in position, while here it is shown removed from machine.

This additional bearing is firmly secured on a yoke of soft steel with a brace underneath the center. The important feature of this improvement is that it supports the main shaft on outside of belt pulley. By this device the strain of the drive belt cannot spring the main shaft which remains absolutely in line with the remaining two bearings. In addition to this it relieves the other two bearings from a portion of the friction. It prolongs the life of the bearings, reduces the wear to a large extent; allows the machine to operate much easier, consequently is a saving of power.

When it becomes necessary to place on or remove drive belt it can be done as this illustration shows, by simply withdrawing three pins, then the yoke with braces, bearings and all can be slipped from shaft as the case may require and replaced again with hardly the loss of a moment's time. The bearing cannot be placed out of line by this operation of removing and replacing again. Realizing the value of this bearing we have applied for a patent on same.

Blizzard Pipe Clamp.

On this page we illustrate the Blizzard Pipe Clamp, or Locking Device for connecting one section of pipe to another. It makes a perfect air-tight joint and holds the pipe together firmly. Being adjustable it can always be arranged to draw tightly about the pipe, holding it very secure

Fig. 12.

no matter what length of pipe is used. The Blizzard Pipe Clamps are used on all pipe, elbows and Silage Distributer.

Fig. 9 shows the graduated elbow joint with clamp attached, which will permit of making an angle or turn out of straight pipe. By the use of one or more of these elbows any difficult position can be reached without short or abrupt angles, which would be injurious to the air blast.

When the Blizzard Silage Distributer is used on end of pipe these elbows are not required.

Fig. 9.

Fig. 10.

Fig. 11.

In Fig. 10 is represented the straight pipe section with elbow joint attached, and another straight joint in turn attached to the elbow showing how the elbows are used to make any desired angle. Four of these elbows will make an angle of about forty-five degrees.

Fig. 11 shows a straight section of pipe. The upper end being lapped, seamed and riveted, while on the lower end the lap is left unturned, and has the Blizzard Pipe Clamp attached. The pipe, elbows and silage distributor are all made from extra heavy galvanized stock, and are therefore very durable.

General Information for L9 Blizzard.

Capacity—4 to 6 tons per hour green ensilage.
 Cuts—Length, $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$, 1 and $1\frac{1}{2}$ inches.
 Cutting Knives—Length, $11\frac{1}{2}$ inches.
 Feed Rollers—Length, 9 inches.
 Feed Table—Complete length, $6\frac{1}{2}$ feet; bottom, 9 inches; top, 18 inches.
 Pipe—Diameter, 6 inches; gauge, 22 galvanized iron in sections of 2, 4 and 10 feet.
 Power— $3\frac{1}{2}$ to 5 H. P.
 Pulley—(Regular) 7 inches; extra sizes which can be furnished to order instead of regular are 6 and 8 inches.
 Side Table— $2\frac{1}{2}$ feet wide by 5 feet long.
 Silage Distributer—Weight, 18 pounds.
 Speed—900 to 1100 revolutions per minute.
 Wagon for Mounting—Weight, complete, 320 pounds. Wheels, 20 and 24 inches.
 Weight—Complete, unmounted, 700 pounds.

General Information for L13 Blizzard.

Capacity—7 to 12 tons per hour green ensilage.
 Cuts— $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$, 1 and $1\frac{1}{2}$ inches.
 Cutting Knives—Length, 16 inches.
 Feed Rollers—Length, 13 inches.
 Feed Table—Complete length, 9 feet; bottom, 13 inches; top, 22 inches.
 Pipe Diameter— $7\frac{1}{2}$ inches; gauge, 22 galvanized iron, in sections of 2, 4 and 10 foot. Weight, per foot, about 3 pounds.
 Power—7 to 10 H. P.
 Pulley—(Regular) 11 inches; extra sizes which can be furnished to order instead of regular are 8, 9, 12 and 15 inches.
 Side Table— $2\frac{1}{2}$ feet wide by $6\frac{1}{2}$ feet long.
 Silage Distributer—Weight, about 20 pounds.
 Speed—650 to 950 revolutions per minute.
 Wagon for Mounting—Weight, complete, 350 pounds. Wheels, 22 to 26 inches.
 Weight—Complete, unmounted, 1300 pounds.

General Information for L11 Blizzard.

Capacity—5 to 8 tons per hour green ensilage.

Cuts—Length, $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$, 1 and $1\frac{1}{2}$ inches.

Cutting Knives—Length, 14 inches.

Feed Rollers—Length, 11 inches.

Feed Table—Complete length, 8 feet; bottom, 11 inches; top, 20 inches.

Pipe—Diameter, 7 inches; gauge, 22 galvanized iron, in sections of 2, 4 and 10 feet.

Power—4 to 7 H. P.

Pulley—(Regular) 9 inches, extra sizes which can be furnished to order instead of regular are 7, 8, 10, 12 and 14 inches.

Side Table— $2\frac{1}{2}$ feet wide by $5\frac{1}{2}$ feet long.

Silage Distributer—Weight, 20 pounds.

Speed—800 to 1000 revolutions per minute.

Wagon for Mounting—Weight, complete, 350 pounds. Wheels, 20 and 24 inches.

Weight—Complete, unmounted, 1100 pounds.

General Information for L15 Blizzard.

Capacity—10 to 15 tons per hour green ensilage.

Cuts—Length, $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$, 1 and $1\frac{1}{2}$ inches.

Cutting Knives—Length, $18\frac{1}{2}$ inches.

Feed Rollers—Length, 15 inches.

Feed Table—Complete length, 9 feet, width bottom, 15 inches; top, 24 inches.

Pipe—Diameter, 8 inch; gauge, 22 galvanized iron, in sections of 2, 4 and 10 foot. Weight per foot, about $3\frac{1}{2}$ pounds.

Power—8 to 12 H. P.

Pulley—(Regular) 11 inches; extra sizes which can be furnished to order instead of regular are 9, 10, 12, 13 and 15 inches.

Side Table— $2\frac{1}{2}$ feet wide by $6\frac{1}{2}$ feet long.

Silage Distributer—Weight, 20 pounds.

Speed—600 to 900 revolutions per minute.

Wagon for Mounting—Weight, complete, 350 pounds. Wheels are 22 and 26 inches in diameter.

Weight—Complete, unmounted, 1500 pounds.

Fig. 1.

Fig. 2.

Fig. 3.

Blizzard Will Deliver Into Any Silo.

It very often happens that the Silo must be placed in rather awkward positions as far as the filling is concerned.

Right here is where the Blizzard again meets the requirements. It has a new adjustable rim and outlet combined. With this feature any point can be reached by simply slackening the two bolts. The rim and outlet can then be moved to any position from that shown in Fig. 1 to Fig. 3, which shows delivery over top of cutter. Fig. 2 is set to elevate perpendicular and where it is possible we recommend this position in preference to any other. Of course where you cannot get close enough to silo with the cutter, any one of the other positions can be used and give satisfactory results.

There is no unnecessary time lost in making the change from one position to another. This is quite an advantage, especially to those who go about doing custom work.

Blizzard With Self Feed Table Partly Set Up.

We give you in these two illustrations the Blizzard with self feed table, also the plain table. Either one can be attached or removed from machine, by simply lowering the rear end and lifting it out of its fastenings. The frame of this table is made of hard wood, firmly joint-bolted, and provided in a manner that an extra side table can be attached if desired. The endless apron is composed of two steel chains, on which are riveted hard wood slats. These chains are propelled and travel over sprocket wheels, secured to a separate shaft directly in the rear of the lower feed roll. The bearings on this shaft are made adjustable, to take up the wear on the drive. The lower feed roll and self feed belt are driven from the same shaft, each is driven, however, by its own sprocket wheel and chain. This device in construction reduces the strain on the drive chain to a large extent, which saves power and prolongs the life of the chain.

Blizzard With Self Feed Table and Side Table Knocked Down.

On the rear end of table is located a shaft with adjustable bearings to carry the endless belt. By simply turning a stay bolt this endless belt can always be kept taut. The plain table can be readily changed to a self feed table machine at a very small additional cost, as most of the parts going to make up the self feed are used on the plain table. This is a nice feature as there are cases where customers purchase a plain table and afterward wish to add the self feed. A strong, durable and well constructed self feed table like the Blizzard certainly pays for itself in the saving of time, labor and increased capacity it gives the machine.

Whether you buy a Blizzard with a plain or self feed table you can be sure of having an article that will give you perfect satisfaction.

Lever Feed Cutter.

We claim for this machine the most convenient and efficient knife lever adjustment of any cutter on the market.

The adjustment is very simple, having but one bolt to contend with, and when this is tightened it is impossible for the knife lever to shift out of line with the throat plate. The knife is of circular form and cuts or shears easily. The gauge plate is also adjustable to suit the length of cut desired. The material and workmanship are of the best. Always shipped knocked down and carefully packed. Weight, 40 lbs.

Alpine Showing Hand Gear Side.

This machine has been especially designed and constructed to meet the want of those in need of good Feed Cutter at a low price.

It is built strong, durable, easily operated and has good cutting capacity. All these points of merit are embodied in the Alpine Cutter. It is constructed in a workmanlike manner and of all first-class material, having improvements not found in other cutters of this class.

The feed rolls are driven continuously by endless space chain and sprocket wheels. The arrangement is such that five different lengths of cut can be made, viz.: $\frac{1}{8}$, $\frac{1}{2}$, $\frac{3}{8}$, $\frac{7}{8}$ and $1\frac{1}{2}$ inch.

Alpine Showing Chain Feed.

The tension of the upper feed roll is produced by the steel spring, in combination with the weight of the knife and roller cover, which yields to the material passing between the rolls. The knives and shear plate are both adjustable. We manufacture the cutter with either one or two eleven-inch knives. All points considered, we are safe in saying it is the cheapest, most durable and efficient Feed Cutter ever offered, and is sure of preference to all other spiral Knife Cutters. Shipped knocked down. Weight, 150 lbs.

Hand Crank Side.

Famous No. 2B and No. 3C Hand Power Cutter.

No. 2B is a hand-power machine; weight, 160 pounds. Has two $7\frac{1}{2}$ inch steel laid knives secured to adjustable supports; has chilled hardened iron cutting plate; has interchangeable feed gears; cuts five lengths, viz.: $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$, 1 and $1\frac{1}{2}$ inch. It is very light running, handy, durable and strong, and will cut any kind of material, from the finest blue grass to the coarsest corn stalks, and do it in a first-class manner.

No. 3C is a hand-power cutter same style as No. 2B but is larger and has heavier fly-wheel and $1\frac{1}{2}$ inch steel shaft; weight, 185 pounds. Has two $9\frac{1}{4}$ inch steel laid knives; cut five lengths, viz.: $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$, 1 and $1\frac{1}{2}$ inch. It is without doubt the very best hand cutter in the market. The weight, strength, width of cut and size of fly-wheel are all accurately proportioned on the Dick Cutters so as to get the greatest amount of strength and durability with the least amount of friction, which is so essential in feed cutters. Every machine is fully tested before leaving the factory.

Feed Gear Side.

Famous Feed Cutter Fly-Wheel.

The most important feature of all in the Famous Cutters rests in the Fly-Wheel. We here illustrate the two knife wheel as used on all sized cutters from the 2B to 6F inclusive.

The size, weight and even the design differs, being proportionately larger and heavier as the different cutters increase in size. Wheel as here shown is arranged for splitting and cutting. The Splitting Bars, of course, are removable for the purpose of doing cutting alone. This system of knives and splitters on balance wheel makes all Famous Cutters very light running.

Famous No. 4D Hand and Power Feed Cutter.

The 4D is arranged for being operated by either hand or power; weight, 250 pounds; has 12 inch pulley, but if ordered will furnish it with 10 inch pulley. Has a set of gears for hand power, with hand-crank on right-hand side of machine. By special order can fit it up to attach two cranks, one on each side, making it suitable for two operators. Has two 10 inch knives fastened on adjustable supports on arms of fly-wheel.

Cuts six different lengths, viz.: $\frac{3}{8}$, $\frac{1}{2}$, $\frac{5}{8}$, $\frac{7}{8}$, 1 and $1\frac{1}{4}$ inch. Power required, from one to two-horse power. When run by power, the capacity is from 1,500 to 2,000 pounds per hour, varying according to speed, nature of material and length of cut. It can be run at a speed of 700 to 800 revolutions per minute. This is the cheapest power cutter in the market. It has a lever by which the feed rolls can not only be stopped at will, but reversed if desired. In addition to this feature, it has the feed gear-wheels all encased, which protects the gearing from grit and dirt, and renders it absolutely safe to operate. The most perfect knife adjustment ever invented. Chilled adjustable shear plate can be ground same as the knives. These improvements are on all our power cutters.

Famous No. 5E Hand and Power Feed Cutter.

No. 5E is the next size larger than the 4D, and of the same style, with the exception of the discharge opening, which is constructed to suit carrier; it weighs 350 pounds. This is a leading size, as it can be used separately for either hand or power. Has hand-crank attachment, same as 4D; it also admits of extra crank attachment making it a double hand-crank cutter.

Has 12 inch pulley; can furnish 10 inch if desired. Has two 13 inch steel laid knives, cuts six lengths, viz.: $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{8}$, $\frac{7}{8}$, 1 and $1\frac{1}{4}$ inch. Power required from two or three horse power. When run by power, the capacity is from 2,000 to 2,500 pounds per hour, varying according to the speed, nature of material and length of cut. It can be run at a speed of 650 to 750 revolutions per minute. This machine is well adapted for a limited amount of ensilage cutting, as it is built strong, and cannot be damaged by over-feeding. For farm use it cannot be excelled. This machine is arranged to attach our improved carrier without special order. The capacity of the different sizes of machines named through this catalogue is calculated on dry material.

Remember that Dick's Famous Feed Cutter is no experiment, but has been on the market for the past thirty-nine years, and proved itself a perfect success.

Fig. 5.

Fig. 6.

Fig. 3.

Crescent Carrier.

We here illustrate and describe the Crescent Carrier, which can be used in connection with all our Famous Cutters from 5E to 7G inclusive. This Carrier possesses many valuable features, namely: New driving device, which not only overcomes the heavy strain on the chain, but allows it to travel so freely that it can be run very slack. Especially constructed Carrier Chain, which admits of attaching or detaching slats without bolts, rivets or screws. (See Figs. 5 and 6). Wide slats which give increase capacity, easily adjusted, can be used to the right, left, or straight away from machine. Can be operated at any angle up to 80 degrees, without adjustment or any interference with the working parts. Is made in sections and owing to its simplicity can be lengthened or shortened with ease. In Fig. 3 we show Carrier complete, with new angle joint device, in cases where the Carrier requires an elevation above 50 degrees, this attachment is used to carry the cut material into Silo. Can be furnished in 2 foot lengths. It is an extra, however, and is only furnished to order. Fig. 4 shows Carrier attached to machine for delivery straight away.

Fig. 4.

Famous No. 6F and 7G Power Feed Cutters.

There is no disputing the fact that a good, well constructed feed table like the new one used on the 6F and 7G Cutters, is a valuable addition to an ensilage cutter.

Fully realizing this we here present these Famous Cutters with this improved feature. The two illustrations, given here and on opposite page, plainly show the new self feed table. Briefly, it is a combined plain or self feed table.

All that is required to make a self feed table out of a plain table machine, is to procure the chain and its attachments and placing them on the plain table you have the complete self feed.

No. 6F is a power cutter next size larger than the 5E, but much heavier and wider cut, and is extra strongly built. It has two 16½ inch knives; has a 14½ inch pulley (can furnish 12 inch if so desired). Weight 500 pounds; cut six different lengths, viz.: ¼, ½, ⅝, ¾, ⅞ and 1½ inch; capable of making from 1,200 to 1,400 cuts per minute, and will cut, according to nature of material and length of cut, from 2,500 to 3,000 pounds per hour. Speed from 650 to 700 revolutions per minute. Power required, from three to four-horse power.

No. 7G has the same width cut as No. 6F, but is heavier, weighing 550 pounds, and has three 16½ inch knives, cutting one-half faster than 6F, or 2,100 cuts per minute, and will cut according to nature of material and length of cut, from 3,000 to 5,000 pounds per hour. Above capacity is calculated on dry material. Speed from 650 to 700 per minute. Power required, from four to five-horse power. These sizes are the best ensilage cutters in the market, as the feed rolls, having an independent universal rocking action, do not press or crush out the juice from the ensilage. All 6F and 7G machines are arranged so carriers can be attached at any time.

Famous No. 6F and 7G Power Feed Cutters.

By simply lowering the rear shaft bearings the endless chain belt can be placed on or taken off the table, as shown in illustration.

It is constructed of the very best material and has many of the advantages our Blizzard Feed Table has, it being similar in construction.

Famous Feed Cutter Fly-Wheel.

This cut gives a view of the fly-wheel as constructed for our larger size Famous Cutters. On the fly-wheel is placed the whole cutting apparatus—the knives, two or three in number, as the case may be (2 on the 6F, 3 on 7G), are supported on adjustable supports. The knives are straight blades. Preceding the cutting knives are a series of steel blades, arranged on curved bars. These blades are set closely to each other, so as to cut, split and crush corn stalks, and all coarse material into minute particles. For cutting hay, straw, etc., these splitter bars are not required, and can be readily detached by loosening two bolts in each bar. The knives make perfect shear cut. It is impossible for them to draw out the uncut hay or straw; they can be adjusted to cut close to the shear plate and cannot cut or run onto it.

Directions for Ordering, from Price List.

In ordering to avoid mistakes, our advice is to order by cipher or code only. Be careful to write cipher distinctly.

By referring to the list, you will notice that the size and style of machines and all attachments are designatd by a distinct code or cipher. By using the cipher much writing can be saved and many mistakes avoided.

Give your full address, State, Town, County and Postoffice; also name of railroad station you wish the machinery shipped to and by what route.

If no route is given, we will select that which is best and cheapest.

For the convenience of our patrons we submit the following:

SPECIAL TELEGRAPH CODE FOR CUSTOMER'S USE.

SPECIAL TELEGRAPH CODE FOR OUR USE IN REPLYING.

Special Telegraph Code for Customer's Use.

Rafter—Can you ship?
 Rambler—Can you ship at once?
 Rampart—If you cannot ship.
 Ranger—Ship at once by freight.
 Ransom—Ship at once by express.
 Rapid—You must ship quickly.
 Rapture—Do not ship.
 Ravage—Have you shipped?
 Rashly—Do not ship until you have advice from us.
 Rational—Telegraph when you are likely to ship.
 Rebound—If you have not shipped.
 Refute—When ready for shipment, telegraph.
 Rehearse—State quickest date for shipment.
 Bacon—At what price and how soon can you ship?
 Badge—Can you furnish from stock, if not, how long will it take to make?
 Baffle—When will you ship our order?

Bag—Telegraph immediately price F. O. B. Canton.
 Bale—Name freight rate from Canton to our city.
 Ball—When did you ship our order?
 Ballast—At what discount will you sell?
 Balloon—See letter.
 Ballot—Please reply immediately by telegraph.
 Balm—Enter order for.
 Bamboo—Duplicate order.
 Bang—If not already executed, cancel.
 Banish—Cancel balance of order.
 Banner—Ship what you have ready and balance as soon as possible.
 Banquet—Ship by mail.
 Banter—Trace quick goods on invoice of.
 Barb—Duplicate and ship at once goods on invoice of.
 Barber—Trace following goods short on invoice of.

Special Telegraph Code for Our Use in Replying.

Radical—Shall we ship?
 Reality—We have shipped.
 Reason—We have not shipped.
 Relax—Wire us whether you can wait.
 Remedy—Will send trace after shipment.
 Bard—We have all in stock and can ship at once.
 Bargain—We have in stock and can ship it.
 Barge—Impossible for us to fill your order in the time specified.
 Bark—If ordered immediately.
 Barn—Immediately on receipt of order.
 Baron—Will ship earlier if possible.
 Barque—For immediate acceptance.
 Barrel—F. O. B. cars your city.
 Barter—We have entered your order for.
 Basket—Your telegram is not clear, please repeat.
 Bate—Reply at once by our code.
 Baton—Subject to immediate reply by wire.
 Batter—Please wire reply to our telegram of.
 Beach—We expect to ship on the.
 Beak—We cannot secure car before.
 Beam—We will not ship until we hear from you further.

Beast—We are tracing goods on invoice of.
 Beauty—We will duplicate and ship at once, invoice of.
 Beckon—We are tracing goods reported short on invoice of.
 Beef—We will ship immediately.
 Beetle—We will ship.
 Belfry—Last of this week.
 Bellow—Early next week.
 Bench—Last of next week.
 Benefit—We will ship tomorrow.
 Benzine—Within three days.
 Betray—Within four days.
 Bestow—Within five days.
 Betwixt—Within one week.
 Bevy—Within ten days.
 Beyond—Within two weeks.
 Bias—Within three weeks.
 Billet—Draft attached to bill of lading.
 Billow—Less two per cent. if paid in ten days.
 Birch—Sixty days, two per cent. cash ten days.
 Bird—Less—per cent. off list price.

NOTE—A, B, C Code 5th Edition also used.

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